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ORIGINAL COMMUNICATIONS.

THE PHYSIOLOGICAL ACTION OF HEMLOCK AND ITS ALKALOID.

BY B. F. LAUTENBACH, M.D.

IN the following paper, an abstract of a prize essay for the degree of Doctor of Medicine in the University of Pennsylvania (the entire essay the author hopes to have shortly published in a different form), there will be presented conclusions based on a study of the papers of former investigators on conium, and on a careful analysis of one hundred and forty-eight experiments made by the writer.

Notwithstanding the labors of Kölliker, Guttman, Verigo, Harley, Pelvette and Martin-Damourette, the present state of our knowledge respecting the physiological action of conium may be summed up in the words of one who was one of the most eminent of modern therapeutists. About sixteen years ago, Pereira (Elem. Mat. Med., vol. ii.) wrote, "In the present state of uncertainty with respect to the real physiological operation of hemlock, it is obviously impossible to lay down indications or contra-indications for its use, which can be much relied upon."

As conia represents the entire active principle of hemlock, I shall confine my remarks almost exclusively to it.

In man, the chief symptom produced when the alkaloid is given in doses just sufficient to impress the system decidedly, is great muscular weakness, accompanied by giddiness, and occasionally by disorder of vision. There is an intense desire to lie quiet in a semi-horizontal position, and, owing to the heaviness of the eyelids which now occurs, the eyes are half closed, thus giving rise to the impression that the person is asleep. On attempting to walk, his feet feel as though they did not belong to him, and he falls, his knees refusing him support. The pulse is at first increased and afterwards decreased in frequency. Sooner or later, as the drug impresses the system, the pupils dilate. In some persons these symptoms are accompanied, rarely preceded, by symptoms of gastro-intestinal irritation, nausea, and, rarely, vomiting. If the dose be a poisonous one, we have, in addition to these symptoms, total failure of voluntary movements and convulsions occurring (*vide* a case of poisoning by hemlock leaves reported by Dr. Bennett, *Edinburgh Medical and Surgical Journal*, 1845).

Physiological effects on vegetables.—Experiments by Marcet (*Ann. Chem. et Phys.*, xxix. 21, 9), Schübler and Zeller (*Schweiger's Journ. f. d. Chem.*, Bd. i. S. 54), and by the writer, have placed it beyond a doubt that the alcoholic extract of conium acts injuriously on plants; but, as in several other experiments the writer ascertained that the alkaloid conia, instead of acting injuriously on plants, really preserves them from decay, the poisonous effects of the hemlock extract must be due to impurities, and not to the exceedingly small amount of conia present.

Local action.—A study of the local action of the drug shows that it causes a progressive loss of functional power in every highly-organized tissue with which it comes in contact. Nerve-centres, peripheral nerves, muscles, both striated and non-striated, all succumb to it alike. If such contact be not continued too long, the tissue may recover even after a total suppression of its functions,—a proof that the alkaloid exerts no destructive caustic influence upon the tissues, such as Van Praag (*Reil's Journ. f. Pharmacodynamik*, Heft i. S. 33) claims. Excluding the burning pain and the anæsthesia which follow it, the writer has never observed any action on the tongue, even if the alkaloid was placed on this most sensitive organ undiluted.

Action on the brain.—Conium is not a hypnotic, though it may possibly cause the brain to become slightly clouded, but not to the extent to produce unconsciousness. In inducing complete repose of the muscular system, conia powerfully predisposes the brain for sleep,—brings sleep within its reach, so to speak, but there leaves it. If the imagination should happen to be dull, the brain may accept the invitation, and sleep occur.

Convulsions were early mentioned as symptoms of poisoning by hemlock; but the cause of these convulsions had never been determined. Christison (Trans. Roy. Soc. Ed., xiii. p. 383) imagined them to be due to a depressing action on the spinal marrow, while Damourette and Pelvette (*Gaz. Méd. de Paris*, 37, 1870) attributed them to excitation of the cord.

Convulsions can be produced by a drug in but five different ways: first, they may be muscular; second, they may be due to irritation of the periphery of the efferent nerves; third, they may be caused by irritation of the peripheral ends of the afferent nerves; fourth, they may be spinal; fifth, they may be cerebral.

That the convulsions of conia-poisoning are not due to irritation of the peripheral motor or sensory nerves, nor to any action on the muscles, was determined, first, by tying the abdominal aorta of various animals previous to injecting the conia, when, notwithstanding the cutting off of the poison from the posterior portions of the body, convulsions occurred uniformly over the whole body; secondly, by injecting conia into the amputated leg of a cat, when not the slightest evidence of spasm was observable.

That the convulsions are cerebral, and not spinal, was determined by the result of a number of experiments in which the spinal cord was cut previous to injecting the conia, when it was found that convulsions occurred in those portions of the body whose nerves were still in communication with the brain, but failed to occur in those portions of the body whose nervous communication with the brain had been destroyed.

Action on the spinal cord.—To determine this action of the drug, the writer made thirty-four experiments, two of which will now be given in full.

Exp. XVII.—On a large frog. Tied all the blood-vessels of the left posterior extremity, carefully excluding the nerves. The weakest current that would cause reflex movements in the injured limb was then determined.

3.58.—Injected one-eighth drop of conia.

3.59.—Acetic acid applied; causes no reflex movements in ligatured limb (previous to the injection it caused movements in one second).

4.01.—It takes the strongest current to produce reflex movements in the ligatured limb.

Exp. XVIII.—Tied all the blood-vessels of the left posterior extremities of a large frog, and then determined the weakest current which would cause reflex movements in the ligatured limb.

4.15.—Injected one-eighth drop of conia.

4.16½.—A much stronger current is required to produce reflex movements in the ligatured limb.

4.20.—The strongest current applied to the ligatured limb will not cause reflex movements.

As the ligatured limbs in these experiments failed to respond to irritants when the access of the drug to the trunks and periphery of the nerves was prevented, this failure must have been due to paresis of the spinal marrow, and not to any direct action on the afferent or efferent nerves. It is therefore proven that there is a steadily progressive stage of spinal depression, with no preceding stage of spinal excitement.

Action on the peripheral efferent nerves.—To discuss this subject is really to discuss what has long been considered, and beyond a doubt is, the chief symptom of conia-poisoning, namely, paralysis. Christison (*loc. cit.*), Reuling and Saltzer (*Deuts. Klin.*, 1853, No. 40), and Van Praag (*loc. cit.*) attribute the paralysis to the action on the spinal cord; while Albers (*Deuts. Klin.*, 1853, No. 34) believes that the paralysis was cerebral.

The first investigator who threw any real light on the subject was Kölliker (*Virchow's Archiv*, Bd. x. S. 228). In 1856 this distinguished investigator announced that the failure of motion in conia-poisoning is due to a direct action upon the periphery of the efferent or motor nerves. He first experimentally determined that in frogs killed by conia the application of the galvanic current to a nerve fails to induce contractions in the tributary muscles. He then cut off the supply of blood to the hind extremities, and found that after voluntary motion had ceased anteriorly, and even after galvanic irritation of the anterior nerves had lost its influence upon the muscles directly supplied by these nerves, irritation of the same anterior nerves caused reflex contractions in the hind legs, thus showing that the anterior afferent nerves and the spinal cord still retained functional activity after the loss of it in all those efferent nerves reached by the poison. He then extended his experiments by severing in a frog all the tissues at the upper part of the thigh, except the nerve, and found that when an animal so prepared was poisoned by conia, after the paralysis was complete in all the extremities to which the poison had access,—after stimulation of the poisoned nerves failed to excite contraction in the tributary muscles,—the leg which had been protected from the action of conia responded not only to irritation applied to its nerve, but also to stimuli placed upon distant portions of the body. After repeating these experiments several times, he drew the conclusion previously given.

His results have been confirmed by Guttman (Reil, Mat. Med. d. Chem. Pflanzenstoffe), by Verigo (*Deuts. Zeitschrift f. Arzneikunde*, xxviii. 2, 1870), and by the writer in a large number of experiments. They have been denied by Dyce-Brown and Davidson (*Med. Times and Gaz.*, July, 1870), they basing their denial on two experiments in which they obtained results directly opposing those of the other experimenters; but their experiments can be readily explained by an anomalous distribution of the iliac arteries which frequently is seen in lower animals.

Recently, upon the foundation of a simple, crude, and inconclusive experiment, Harley (Old Vegetable Neurotics, p. 11) has readvanced the opinion formerly held by Albers, that conia affects chiefly the corpora striata and the other centres at the base of the brain supposed to mediate between the will and the spinal cord; he attempts on this supposition to explain the paralysis. After studying his experiments and conclusions most thoroughly, one cannot help wondering at the fact of so eminent a physiologist and therapeutist drawing such an unwarrantable conclusion.

After studying the papers of the preceding investigators, it will be seen that the cause of the paralysis is still somewhat undecided. Paralysis can be produced by a drug in four different ways: first, it may be cerebral; second, it may be due to spinal paralysis; third, it may be due to direct action on the muscles; fourth, it may be due to paralysis of the peripheral ends of the efferent nerves.

That the paralysis of conia-poisoning is not muscular is proved by the circumstance that muscles taken from animals completely paralyzed by conia —paralyzed to such an extent that galvanic irritation through the nerves fails to excite contractions —can be made to contract most energetically when the galvanic current is applied directly to the muscles.

In fifty-one experiments made by the writer on dogs, cats, mice, and frogs, the main blood-vessels supplying one or both posterior extremities were tied before injecting conia, and in all but two of these experiments the limbs protected from the drug's action were not paralyzed until just before the occurrence of death, thus proving that the paralysis must have been peripheral. Had it been cerebral or spinal, the paralysis would have occurred uniformly over the whole body, notwithstanding the ligature of the blood-vessels. The same action was demonstrated when conia and strychnia were injected simultaneously into the abdomen of frogs from whose posterior extremities the direct access of the poison had been cut off. By their conjoint action there was produced a commingling of paralysis in all other parts of the body, with violent tetanic spasms in the protected limbs. This commingling would have been impossible if the paralysis were due to any action on the spinal cord or on the brain, and it can be explained only on the supposition

that conia paralyzes all the motor nerves with which it comes in contact.

Two experiments on young cats gave very exceptional results, which the writer is unable to explain except on the supposition that conia has a double action on the motor nervous system,—a paralyzing action on the peripheral ends of the efferent nerves, and a depressing action on the spinal motor tract. In almost all cases the former occurs first and predominates, the spinal paralysis not occurring until the period of death; yet in a few instances the former does not occur, while the latter becomes more marked.

Action on the peripheral afferent nerves.—Except the loss of irritability of the eyes, the sensory nervous system has always been supposed to remain unaffected. In some of the earlier experiments evidences were seen which threw doubt on this supposition, but later, when a number of experiments were made especially to determine this point, these doubts became certainties. These experiments proved that not only is sensation impaired, but that this impairment is due to paresis of the periphery of the afferent nerves.

In opposition to these conclusions could be cited all investigators on conia since the time of Christison; but, as I have yet to find the first paper in which efforts have been made to prove that loss of sensation does not occur, little importance can be attached to such assertions.

Action on the circulatory system—pulse.—In ordinary therapeutic doses, conia causes an increase in the number of heart-beats, which is followed by a decrease to the original number of pulsations. In poisonous and even in very full therapeutic doses the subsequent decrease is much greater than the primary increase. As no increase in the number of heart-beats occurred when the pneumogastrics were cut previous to giving the conia, the primary increase must have been due to paresis or paralysis of the pneumogastric centres. The subsequent diminution in the number of pulsations can be best explained by the occurrence of paresis of the vaso-motor nerves, due to commencing paralysis of the spinal cord.

Arterial pressure.—Conia causes the column of mercury in the cardiometer to be decidedly lowered at first, but very soon the mercury rises to far above its original height.

Action on the respiratory system.—The first effect of a poisonous dose of conia is to cause an increase in the number of respiratory movements; this is followed by a diminution, and ultimately, if the dose be sufficiently large, by their complete cessation. As the primary acceleration does not occur when both vagi have previously been divided, the acceleration must be due to an action on the pneumogastrics.

The failure in the respiratory movements advancing *pari passu* with the paresis of the voluntary muscle—general paralysis and the cessation of all respiratory movements occurring at the same time—renders it very probable that the diminution in the respiratory movements is due to the same cause as the paresis of the voluntary muscles.

Gastro-intestinal action.—In ordinary medicinal doses no gastro-intestinal symptoms occur in man; in some experiments made by the writer, grain doses did not produce the slightest nausea, or even anorexia. In dogs, who vomit readily, this symptom almost always occurred, even if the drug was given hypodermically, proving that the gastro-intestinal irritation is not due to any local action on the alimentary canal, but that it is due to a specific action on the gastro-intestinal apparatus.

These symptoms are not exclusively canine, as attempts at vomiting are recorded by Bennett (*loc. cit.*) in a case of fatal poisoning by hemlock-leaves; and Schroff (*Vierteljahrschr. f. Praktische Heilkunde*, 1855), in his experiments on the human subject, records one case in which vomiting occurred.

Action on the glandular system.—One of the first effects of a large dose of conia, in about one-half of the experiments, was to increase the secretion of the salivary glands. As this increase occurred when conia was injected into a vein or into the peritoneum, it cannot be due to any local action, but must be due to stimulation of the chorda tympani and other nerves concerned in the secretion of saliva.

Conia has no influence on the quantity or quality of the urine, nor has it any influence on the function of the skin. Its action on the biliary secretion has not yet been determined, but the circumstance that after death from conia-poisoning the gall-bladder is always found distended with bile, renders it probable that it increases the flow of bile.

Action on the muscular system.—The voluntary muscles escape unscathed in conia-poisoning, they continuing to respond to galvanism for a considerable period after death. The contractility of the muscles, however, may be destroyed by soaking in a concentrated solution of the alkaloid; but before such an effect can be produced in life the animal will have perished.

On the non-striated muscular fibres the action of the drug is more pronounced. Geiger (*Mag. f. Phar.*, Bd. xxxv. S. 72, 256) states that it produces irritation of the muscular fibres of the diaphragm and alimentary canal, while in the experiments made by the writer, contractions of the muscular fibres of the intestinal canal and bladder occurred.

Action on the pupil.—Dr. Hoppe (*Die Nervenwerkung d. Heilmittel*, Leipzig, Hft. 1) made a number of experiments to determine this action of the drug, and, in conclusion, says that in the beginning the pupil is contracted, but later it becomes very much dilated. His conclusion has been confirmed by Pelvette and Damourette (*loc. cit.*), who attribute the contraction to "augmentation of the excitability of the spinal cord;" but, as the contraction occurs only when conia is locally applied to the eye, it must be due to irritation, and to no general action whatsoever. The dilatation which is always produced when conia is absorbed is due to the paresis of the peripheral extremities of the motor oculi nerves no longer enabling the sphincter of the iris to counteract the radiating fibres supplied by the more slowly paralyzing sympathetic nerve.

Action on the temperature.—All investigators of conia have thus far almost totally ignored this action of the drug, and, so far as I am aware, until this

investigation no one has ever imagined that conia was so peculiar in its action as to be one of three drugs that decidedly increase the temperature of the animals poisoned. This increase occurs not only from poisonous doses, but also when ordinary therapeutic doses are given: *e.g.*, in the human subject one-seventh of a grain of conia caused the temperature to rise from 97° to 99½°. This increase in temperature lasts from three-fourths of an hour to an hour and a half, when the temperature gradually becomes normal.

Action on the sexual organs.—The genital depression attributed to conium by the ancients, modern investigators have been unable to discover. The ancients believed that not only did it repress sexual desire, but that it actually caused an atrophy of the testes and mammæ, which latter of course implies atrophy of the ovaries also. The utter falsity of this belief was shown in several cases of chorea occurring in girls about the age of puberty, in whom menstruation came on while they were under the physiological effects of conia.

While conia has no effect on natural sexual desire, morbid states are said to be much influenced by it. In proof of this Dr. Harley (*loc. cit.*) writes, "In those states of exhaustion and irritability which arise from self-abuse, and in those cases of erotic tendency that arise from some obscure irritation of the lumbar portion of the cord, I have never known conium to fail to give relief." This relief is better explained, however, by referring it to the depressant action which the drug has on the spinal cord than to any possible action on the sexual organs.

Absorption and elimination.—That conia is absorbed is beyond question, as it has been found by Orfila in the spleen, kidneys, and lungs of poisoned animals. The drug probably undergoes no change in the system, although Harley says it does because he failed to find it in the urine of an animal poisoned by hemlock; yet it is eliminated by the kidneys, in whose secretion Zaliski and Draggendorf found abundance of it in the first twelve hours of the poisoning, and traces of it for two days and a half.

That it is not necessary for conia to be changed in the system in order to produce the most marked action—that on the periphery of the efferent nerves—was proved by the following experiment:

Exp. LXXVIII.—Cut off both hind legs of a cat just killed with chloroform; both sciatic nerves respond equally to galvanism. Into the left femoral artery a one-grain solution of conia, while into the right an equal quantity of water, was injected. In thirty seconds the application of the galvanic current to the left sciatic nerve causes no response, while its application to the right sciatic causes contractions in its tributary muscles.

MURIATED TINCTURE OF IRON A CURE FOR NASAL POLYPI.

WITH A CASE.

BY GEORGE TROUP MAXWELL, M.D.,

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I DESIRE to recall the attention of the profession to an efficient mode of treating nasal polypi, which has not received the favor that, in my opinion, it is entitled to, and which has, therefore, suffered unmerited neglect.

Without intending or desiring to exaggerate the danger, pain, and loss of blood caused by the operation almost universally practised for the removal of nasal polypi, namely, evulsion,—for I know that they are usually inconsiderable,—I nevertheless confidently assert that it has terrors for the subjects of the malady, and that many who are thus afflicted are deterred thereby from obtaining desired relief. Therefore, in this fact—that it presents itself in a less "questionable shape" to the instincts of a patient—is a potent reason in favor of the treatment of nasal polypi with muriated tincture of iron; and when its efficiency as *a radical cure* is guaranteed "the argument is exhausted," almost.

If it be true, as I believe, that nasal polypi (and here I desire to say that my experience is limited to the common or gelatinoid variety) can be removed by the use of muriated tincture of iron, *certainly and expeditiously*, there is an additional strong reason for its employment; which is, that the tendency to repullulation of the polyps can be thus effectually checked, and their reproduction prevented. All surgeons know, and all writers upon the subject admit, the frequency with which such growths are reproduced, after evulsion; but by occasionally inspecting the nares, successive polyps can be easily aborted upon their earliest appearance, by the application of the iron tincture.

The cure of nasal polypi by the employment of muriated tincture of iron was recommended first by Dr. J. H. Reeder, of Lacon, Illinois, who reported two successful cases in the *Chicago Medical Journal* for September, 1859. In 1867 I published a short article corroborative of Dr. Reeder's statements and experience, in the *St. Louis Medical Reporter*, in which the details of three successful cases were given. That article was reprinted in Paris. So far as my information extends, these papers comprise the whole literature of this subject. The profession did not derive from them a full appreciation of the importance of the subject, and, in consequence, a valuable suggestion has been permitted to languish from neglect.

That too little interest in the matter has been awakened is to be inferred from the fact that, in his "System of Surgery," Prof. Gross simply mentions Dr. Reeder's suggestion, and speaks of the mode of treatment—which he had not tried—as a "waste of time;" and, also, because Dr. J. Solis Cohen, in his admirable "Lectures on the Surgery of the Nares, etc.," published in this journal in 1873, neglects to make any reference to the subject. To a letter which I addressed to Dr. Cohen, subsequently to the publication of those lectures, he replied that he had never used the tincture of iron for the cure of nasal polypi, but would give it a trial.

But now to the case:

T. D., carpenter, aged 56 years, came to me to be treated for nasal polypi on the 26th of November last. His general health was good, but he had not breathed through his nostrils, or perceived odors, for over thirty years. The nares were completely closed and impacted

with gelatinoid polypi, which always produced a feeling of discomfort, and sometimes considerable pain. The distention was at times very great, and caused some disfiguration. He had used blood-root and a number of other astringents without effect, but had never been able to summon the courage required to submit to the operation of evulsion. I injected about a drachm of the tincture of iron, reduced in strength one-half by admixture with water, into each nostril, holding his head back so as to retain the fluid in contact with the polyp a few seconds. This simple operation was repeated daily, and on the third day the masses began to slough and to be discharged. At the end of a week their destruction seemed to be complete; the nares were pervious, and the sense of smell was recovered.

The treatment of this case was more protracted than any I had before encountered, three or four days being sufficient hitherto. The delay in this case I attribute to the impacted condition of the nostrils, which prevented access of the tincture to any but a limited portion of the body of the polyp. As soon as the fluid gains access to the pedicle, the cure is rapid, because the death of the polyp is quickly effected. In this case the injection was repeated the third or fourth time before the fluid could pass through the posterior nares into the pharynx. The irritation of the nares caused by the dilute tincture is trifling in severity, and of short duration. Mr. D. discharged the duties of his vocation, without interruption, whilst the treatment of his case was in progress.

AN ADDENDUM TO AN ARTICLE ON AN "OBJECTIVE NOISE IN THE EAR," ETC.

BY CHARLES H. BURNETT, M D.

IN No. 172, current volume of the *Philadelphia Medical Times*, I presented an account of an objective noise in the ear of a Japanese. As the patient expressed little or no desire to be relieved of the noise, I had an opportunity of watching any other phenomena connected with this singular case.

On February 6, the patient informed me that since he had visited me last, a few days previous, a perforation had occurred in the membrana tympani of the ear in which the snappings had been heard, and that the peculiar noises had nearly ceased.

I found, indeed, a perfectly well-defined dry perforation in the antero-superior quadrant of the membrana tympani where I had previously observed the spasmodic retraction of the membrane, but there was no explanation of the perforation so far as I could discern, and the patient could furnish no solution of its occurrence.

The snappings had become nearly inaudible and very infrequent, and in a few days entirely disappeared. Although a little discharge ensued in about a week after the perforation, probably from the exposure of the mucous lining of the tympanic cavity to the winter atmosphere, it was easily checked, and the membrana tympani closed. Since then there has been no return of the snapping noise, nor any spasmodic motion in the velum palati, Eustachian tube, middle ear, or membrana tympani.

The natural history of this case is suggestive of a possible treatment in similar cases, when the noises occurring in an ear with intact membrane cause such a degree of annoyance to the patient that some effort towards relief is demanded of the surgeon. I would therefore venture to suggest that it might be well to perforate artificially the membrana tympani in such a case, for we have seen that almost immediate relief was given by a natural perforation of the membrana tympani in the Japanese case.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINIC OF DR. R. J. LEVIS.

Reported by JOHN B. ROBERTS, M.D.

EXCISION OF A LARGE VASCULAR TUMOR OF THE FACE IN A CHILD.

A MALE child, aged two and a half years, presents an immense tumor, involving the entire cheek and lower lip upon the right side, and projecting into the cavity of the mouth. At his birth it was the size of a hen's egg, but by continuously increasing it has now attained a great bulk, forming a pendulous mass, extending backward from the middle of the lip, and bulging about four inches forwards. The inferior maxilla has become deformed, and the teeth displaced, by the pressure and dragging of the tumor; and it projects so much into the cavity of the mouth that it is almost impossible for the patient to put the teeth of the two jaws in contact, and he has therefore been obliged to subsist almost exclusively on a fluid diet.

The tumor is painless, soft to the touch, its surface purplish in color; and the slightest scratch upon it is followed by copious hemorrhage, from the recurrence of which the child has at several times almost perished.

All these points render the diagnosis clear, and prove the tumor to be a nævoid growth, or hypertrophied condition of the capillary vessels, which must be removed if the patient is to have any chance for his life, since it is rapidly growing, and the occurrence of uncontrollable hemorrhage may cause his death at any time.

Nævoid tumors are usually congenital, and their most common site is upon the head and face, though they may occur anywhere, since they are pathologically merely a hypertrophy of the capillary arteries and veins; in some cases the arterial, in others the venous element predominating. They may increase in size

until they, as in the present instance, attain an enormous bulk; they are also temporarily enlarged and made more turgid by crying or any exertion on the part of the patient which increases the intravascular blood-pressure.

The location of vascular tumors is generally in the subcutaneous connective tissue or the skin, so that they are entirely covered by healthy integument, or, as is more frequently the case, the vessels of the skin are blended with the tumor, and an appearance of vascularity is evident, especially at the most prominent part of the tumor. These tumors becoming ulcerated, hemorrhage may supervene, which, if profuse, may jeopardize the life of the patient. In some cases when they have been allowed to remain until adult life in females, they have been the seat of vicarious hemorrhage at each catamenial period.

In this case the tumor is probably, like most nævoid developments of childhood, a mass of tortuous veins, which are varicose and cavernous. The term aneurism by anastomosis has been applied to nævoid tumors, but especially to those with a decided predominance of the arterial element, and in which pulsation, synchronous with the heart, is often evident.

Vascular tumors when superficial can scarcely be confounded with other growths, for the pulsation, the more or less complete emptying under pressure, and the increase in size during excitement or when held downward so that the blood gravitates into them, are sufficiently characteristic. When located in the deeper structures, however, the evidences may be masked and very obscure, so that a positive diagnosis may be exceedingly difficult.

The usual treatment is to transfix the nævus with pins, around which a ligature is wrapped, and the growth thereby strangulated and allowed to slough; or excision may be practised in order to remove the angeioma, which method, however, is generally accompanied by a good deal of bleeding. In this case the size of the mass renders it inadvisable to attempt strangulation, and therefore it shall be excised, after hemorrhage has been guarded against by thrusting a number of long acupressure-needles through the tissues around its base, so as to cut off the entire blood-supply. It would hardly be possible to extirpate the mass by keeping the knife entirely in the surrounding healthy tissue, and if the least portion of the angeioma remain it would bleed profusely from the cut surface. Hence it is better to apply acupressure at the base of the tumor to all the afferent vessels before commencing the operation of excision. The first long acupressure-pin is entered at the angle of the jaw, and pushed forward along the bone, to control the facial artery, which has been dragged somewhat out of position; the coronary is next compressed in a similar manner; and so a half-dozen long pins are thrust through, thus circumscribing the base of the tumor, and overlapping each other somewhat, in order to guard every point. Strong cords are then wrapped around the needles, including the base of the tumor, to render it still more safe, since the child, enfeebled by previous hemorrhages from the surface of the growth, can ill afford to lose any blood during the operation.

The knife is now carried around within the line of the circumscribing pins, and the mass, consisting of a network of hypertrophied vessels, removed. The tumor now looks quite collapsed and shrunken, for the blood has all flowed out of the spongy mass. There will be no attempt made to draw the edges of the large, gaping wound together, and of course the acupressure-needles shall remain for a day, or longer, unless there be appearance of sphacelation caused by them. The dressing shall consist of the carbolized oil so much used in this hospital. * * * * * *

The patient, after having continued for almost a week in a favorable condition, began to show signs of exhaustion, probably due to the imperfect manner in which he had been for a long time fed on merely weak fluid nourishment. He finally became unable to take proper and sufficient food, and soon died, exhausted.

TRANSLATIONS.

Serous Ovarian Cysts.—At a recent meeting of the *Académie de Médecine*, Dr. Panas read a paper on this subject. His conclusions are as follows:

1. Among the cysts called ovarian, there is a class of unilocular cysts containing a special fluid, the treatment of which is as simple as it is certain in its results.

2. The characters of the cystic fluid are: complete absence of viscosity; perfect diaphaneity (with occasional exceptions); poverty in proteinous material (modified albumen); and its relative richness in alkaline salts, principally chloride of sodium. Slightly or not at all precipitated by heat and nitric acid, the liquid in question is precipitated by alcohol. In this respect this fluid bears a certain analogy to that found in the spermatic cysts of men, as we may be convinced by comparison of the two fluids.

3. We are at present ignorant as to whether the point of origin of these cysts is actually in the ovary or is not rather in the *parovarium* (body of Rosenmüller).

4. The treatment of these cysts is still more simple than that suggested by Boinet, who proposed puncture by means of a trocar, followed by injection of iodine. A simple puncture by the trocar is sufficient to bring about a cure, by removing the fluid completely or even partially.

5. By this process not only is all danger avoided, but even the slightest pain to the patient. In a word, the treatment of these cysts is easier than that of simple or spermatic hydrocele in men, which requires, almost always, the subsequent employment of caustic or strongly irritating injections.—*Le Mouvement Médical*, March 13. X.

Comparative Value of Carbolic and Salicylic Acids in Diabetes.—Ebstein and Müller continue (*Berliner Klin. Wochen.*, No. 5, 1875) their researches upon the action of carbolic acid in diabetes mellitus, and add some observations upon the use of salicylic acid in the same disease. They believe that in certain cases of this disease carbolic acid diminishes the proportion of sugar in the urine, together with the various other diabetic symptoms. These cases are probably those which are connected with obesity, and where an anti-diabetic diet is apt to do good.

Carbolic acid is particularly useful in the lighter cases,—those in which the Carlsbad cure does so much good. It does not, however, any more than the latter, protect against relapses; and, indeed, it fails in some cases when this does well.

Salicylic acid seems to be quite powerless for good in diabetes mellitus; although it is less disagreeable to take, yet many patients actually prefer carbolic acid. The latter may be administered in doses of one centigramme or more. It rarely disagrees; in one case occasional burning pain in the œsophagus was noticed. It in no way disturbs the stomach. X.

Vices of Conformation in the Anus.—Dr. Delens communicates the two following cases to the *Bulletin Gén. de Thérap.*, March 13: In September, 1874, he was called to see a little boy, four years of age, in whom two anal openings were made out, situated on either side of the median line, and separated by a cutaneous band; only the right was perforated, and communi-

cated with the rectum. The median septum was excised, and the two ani united into one. This abnormal conformation gave rise to no inconvenience in defecation. The second case was that of an infant, not forty-eight hours old, and who presented an imperforation of the rectum; the anus was well formed exteriorly. The operation was immediately performed; in order to get at the bottom of the cul-de-sac more easily, resection of the coccyx was performed. At present this little patient, who is six months old, has a prolapse of the rectum. Perhaps this prolapse is due to the resection of the osseous appendage. It should be noted that the infant lived under very unfavorable conditions.

X.

EPILEPTIFORM ATTACKS FOLLOWING PARAPHIMOSIS (*Wien. Med. Presse*, March 7).—Dr. Moritz Werthur reports the case of a healthy boy, 15 years of age, in whom a severe paraphimosis had been brought about, in all probability, by attempts at onanism. When first seen, the swelling of the parts would not allow manual reduction. After the administration of an anæsthetic, a slight incision was made to relieve tension in the œdematous tissue, and the paraphimosis was reduced. A dressing of cold-water cloths was used, together with a bit of charpie moistened with dilute solution of carbolic acid placed between the prepuce and the glans. The parts recovered their natural condition within three days, but at the end of that time the patient was seized with frequent and severe epileptic convulsions. Suspecting psychical causes, since nothing could be observed to account for the trouble so far as the lately-affected parts were concerned, Dr. W. made use of the oxide of zinc in repeated doses, in connection also with diminishing amounts of morphia. The attacks ceased within a week, and for two years, up to the date of the communication, had not returned. Dr. W. adduces, as confirmatory of the benefit of this drug, the case of a pregnant woman attacked by epilepsy, who, after trying various remedies in vain, was quickly cured by the use of valerianate of zinc and morphia. X.

CAUSES AND SIGNIFICATION OF SUBSCAPULAR FRICTION.—Under this title Dr. Terrillon (*Archives de Méd.*, 1874) calls attention to a peculiar crepitation produced by movements of the scapula over the chest-walls in spare persons, and in patients who suffer from anchylosis of the shoulder.

The contact of the two osseous surfaces rubbing one over the other causes the formation of a serous sac. This presents a special pathology with which it is necessary that the physician should be acquainted. Dr. Terrillon, in his communication to the *Archives*, treats of inflammations, abscesses, hygromata, cysts containing rice-like particles, etc., as occurring in connection with this serous sac.—*Le Progrès Méd.*, February 6.

X.

DERMOID CYST OF THE OVARY.—M. Terrier communicates the following observation. It concerns a patient coming under his care for a voluminous tumor occupying the right iliac fossa and presenting all the characters of an ovarian cyst.

An exploratory puncture revealed the existence in this tumor of epithelial cells, of hair, and of a thin grayish-white liquid. An operation was decided upon, and was accomplished without difficulty. The results were favorable. The temperature never rose above 100.5° F. Retention of urine supervened without appreciable cause, but disappeared at the end of five days. Histological examination of the sac showed that it presented on its internal aspect the appearance of skin. In fact, hair, fatty granules, sudoriferous glands, etc., were found.—*Bull. Gén. de Thérap.*, March 15.

X.

THERAPEUTIC NOTES.

LIQUID GLYCERIN FOR BURNS.—

℞ Calcis oxid., gr. iii;
Spirit. chloroformi, gr. iii;
Glycerinæ, ʒiiss.—M.

Charpie is dipped in the mixture, and placed over the burned surface; it is then covered with a thin sheet of gutta-percha, and the whole surrounded with a loose bandage. It is important that the charpie should be closely applied to the entire burned surface. The pain ceases almost instantly, and the sore heals very rapidly. —*Trans. N. Y. Med. Jour.*

WORMS.—

℞ Santonini, gr. iii;
Sacch. alb., q. s.

M.—Ft. in chart. no. iii.

For a child of two and a half years one of these powders may be given at bedtime for three days, the food in the mean time being soups and broths in small quantity. On the morning of the fourth day a dose of calomel and jalap may be given; subsequently a tonic.

TREATMENT OF PERTUSSIS BY INHALATION.—

℞ Ext. belladonnæ, ♏ v ad x;
Potass. bromid., ℈i;
Ammon. bromid., ℈ii;
Aquæ, fʒii.—M.

Inhale one tablespoonful in the ordinary steam atomizer; or this amount may be diluted by filling up the glass with water. In severe cases this may be used twice daily, until the urgency of the symptoms is relieved, and then continue once daily until the cough has entirely disappeared.—*Boston Med. and Surg. Jour.*

PROLAPSUS ANI TREATED BY ERGOTIN.—Von Langenbeck is said to treat prolapsus ani with astonishing success by hypodermic injections of a solution of ergotin (five to fifteen parts in one hundred of water). He replaces the bowel, and, inserting the point of the syringe about an inch deep into the cellular tissue, throws in from one to two grains of ergotin. This should be repeated every three or four days for several weeks, hardened fecal masses having been first removed by injection.—*Medical Press.*

COLLODION AND MORPHINE IN SHINGLES.—After exhausting all the methods advised for the treatment of shingles, and especially the atrocious pains which attend this disease, Dr. Bourdon adopted the following. A stratum of morphinated collodion (collodion 30 grammes, muriate of morphia 50 centigrammes) was applied to the diseased parts without opening the vesicles. The pain ceased on the second day, and after seven or eight days, when the pellicle fell off, the vesicles had entirely disappeared, and only a slight redness was apparent.—*Gaz. Med. Ital.*

INJECTION IN BLENNORRHAGIA.—

℞ Potass. bromid., ʒiss;
Glycerinæ, ʒiii;
Aq. destillat., ʒiv.—M.

Inject every four hours, bromide of potassium being administered at the same time internally. This injection may not only be used in the chronic but also in the acute stage of the disorder. When the disease approaches the end of its course, an astringent may be added to this solution. Abstinence from beer and stimulating food is advisable.

PHILADELPHIA
MEDICAL TIMES.
A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

PRINCIPLES AND STATISTICS IN HOSPITALISM.

THERE are two distinct methods of solving the various practical questions which arise in our every-day professional life: one, the application of principles, the other, the use of statistics. Each of these methods may lead to false results, because human nature is weak and fallible. Principles as seen by any one mind are simply the conceptions, original or acquired, of that mind, and may be as devoid of truth as a fool is of wisdom. Further, even if these principles, *i.e.*, the premises, be correct, the application, *i.e.*, the assumed sequence, may be as illogical as the average human intellect. To enumerate the loopholes by which error may creep into statistical arguments would be as hopeless a task as to attempt to count human failures in observation or statement.

These things being so, it seems to us that only by the free use of both methods, and the correcting of one by the other, can truth be arrived at.

It appears to us a fixed principle that absolute freedom to the air affords the best possible ventilation; that no artificial means can ventilate any large apartment so thoroughly as nature ventilates the single tree-top of the open prairie. If this principle be true, it appears logical that the nearer any apartment in its conditions approximates to the open air the better ventilation it will have. A simple roof raised upon high distant iron pillars ought to afford, so far as ventilation is concerned, the best possible form of a ward, and, we believe, in a warm climate it would yield the best surgical results. No statistics have ever seemed to us necessary to determine that an open tent, if it can be well warmed, offers a better chance than any surgical ward to those who are so unfortunate as to undergo serious operations. Carrying out this same line of argument, it seems a natural conclusion that the best summer ventilation in an ordinary hospital is to be obtained by having an abundance of windows and keeping them always wide open.

Holding these views, we naturally were somewhat surprised by the following paragraph, from the first paper in the current number of the *American Journal of the Medical Sciences*:

"Of the total number of deaths after amputations during forty-five years, we find that the mortality of the different months of these years was as follows:

January,	11 died.	July,	29 died.
February,	15 "	August,	22 "
March,	15 "	September,	19 "
April,	16 "	October,	21 "
May,	27 "	November,	11 "
June,	25 "	December,	19 "

"It will be observed that the smallest number of deaths occurred in January and November, when the hospital wards have pure but heated air by forced ventilation, while in the months of May, June, July, and August, when the ventilation in the hospital is effected by simply opening windows, we find the largest number of deaths. Mr. Edward Richardson has examined the hospital records, and has found that during a period of twenty-five years, from 1850 to 1874, inclusive, in 2015 deaths in the surgical wards, the months of February and November also exhibit the smallest number; from May to September the mortality was very much greater; while in July and August the deaths were double the number of those in February. These results may be induced by various agencies, but they naturally suggest the subject of ventilation in the summer in hospital wards, and whether proper change in the air of a ward can be brought about without open fireplaces or currents of air forced from a fan. It is well known that opening all the windows of a ward in certain states of the atmosphere will not change the air at all, and there is little doubt that either of the above-mentioned plans to secure ventilation might be adopted with much better results."

The more the conclusions reached in this paragraph are thought over, the more definitely does it appear that either the principle which we have brought forward or else the statistics just detailed are at fault. Not being able to find any incorrectness in the principles, we have naturally been led to examine the statistics. We have not access to the records of the Hospital, but Dr. Morton in the

earlier portion of his paper gives a chronological table of all the operations performed in the hospital during the years 1870, '71, '72, '73, and '74. Rearranging this list, so that it shall show the number of operations per month, *presto*, the number of deaths is greater in July than in January *because* there are *more cases;* the mortality *per cent.* is greatly less in the summer than in the winter months. This is the list:

WINTER MONTHS.

	Cases.	Died.		Cases.	Died.
January, 1870	2	1	November, 1870	2	0
" 1871	2	1	" 1871	4	0
" 1872	1	1	" 1872	2	1
" 1873	2	1	" 1873	2	0
" 1874	3	3	" 1874	1	1
	10	7		11	2

Mortality per cent., $42\frac{8}{17}$.

SUMMER MONTHS.

	Cases.	Died.		Cases.	Died.
May, 1870	3	1	June, 1870	3	1
" 1871	5	1	" 1871	7	2
" 1872	1	0	" 1872	3	0
" 1873	1	1	" 1873	3	0
" 1874	2	0	" 1874	1	1
	12	3		17	4
July, 1870	1	0	Aug., 1870	3	1
" 1871	1	0	" 1871	2	2
" 1872	4	1	" 1872	4	0
" 1873	4	1	" 1873	3	0
" 1874	8	1	" 1874	3	1
	18	3		15	4

Mortality per cent., $22\frac{8}{10}$.

These figures apply, of course, only to certain years, but they are seemingly sufficient to reconcile statistics and principle until, at least, it is shown by actual demonstration that the apparent fallacy in the numerical argument does not exist. It is hardly possible that what is true of five years is not true of many years,—namely, that there is more business activity and consequently that there are more accidents in this region during the summer than during the winter.

A GOOD deal of interest has been excited by the report before one of the London societies of a case of injury in the spine, in which it is asserted that for a long time the temperature remained above 120° F., reaching even 125° F. It was noted at the same time that the feet were icy cold. The only record we have ever known equal to this was that of a Siberian traveller who stated that the weather was so cold that the birds froze stiff whilst flying, and that a mercurial thermometer registered —224° F. It seems to us most probable that there was some deception in the *Lancet* case; for the fact that the temperature was taken only in the axillæ indicates that the gentlemen in charge did not so thoroughly appreciate the seeming impossibilities of their record as to guard against possible deception. There is much reason to believe that, in certain diseases, local rises of temperature occur, and H. Weber reports cases of hysteria in which the axillary temperatures as recorded were far above normal, although when the instrument was placed in the mouth the mercury failed to rise. How the deceptive rise was produced Dr. Weber could not determine; but all modern physiology teaches that a general temperature of 125° is simply impossible, and the record must be viewed as the result either of a deception or of an extreme localized fever.

PRE-EMINENT among all the private schools of medicine that have flourished on the Western continent, whether judged by the length of its life, the number of its graduates, or the fame of its teachers, is, and probably must forever remain, that school in Chant Street which has just been uprooted by the ruthless hand of the Government. Opened in March, 1820, its halls have been the nurseries of medical babes and the gymnasia of young medical athletes for more than half a century. Surely the memory of such an institution is worthy of embalming in that most abundant of all modern fluids,—printers' ink. It is, therefore, with great pleasure that we call attention to the farewell oration pronounced over the dying bed of the alma mater of such a numerous progeny.* Let every graduate furnish himself with this skilfully wrought monument, that now, if age be already come upon him, or in the future, if the evil days have not yet come nigh, he may, as a voyager upon a map, retrace the journeyings of his former years.

THE constant improvement in the opportunities offered in this city for the study of medicine during the spring and fall months is very great and very gratifying. To any one desirous of acquiring a thorough medical education, no city on the continent to-day holds out greater inducements. Indeed, we doubt if, on the whole, any other city is as well prepared to produce thoroughly educated physicians. Our clinical advantages are certainly superior to anything outside of New York, and now to them are added means of practical instruction upon the fundamental sciences of our art. Laboratories for histology and pathology, chemistry, and physiology are now being brought into operation, under most competent teachers.

* The History of the Philadelphia School of Anatomy, and its Relations to Medical Teaching. A lecture delivered March 1, 1875, at its dissolution, by William W. Keen, M.D. Philadelphia, J. B. Lippincott & Co., 1875.

CORRESPONDENCE.

NEW YORK MEDICO-LEGAL SOCIETY.

AT the regular meeting of the New York Medico-Legal Society, Thursday, March 25, Prof. F. H. Hamilton spoke on "Malpractice in Surgery; its Causes and Remedies."

He said he would take as a text of his remarks a letter which he had received a few days previously from a surgeon in Illinois, asking him if he had a form of agreement to be made between patient and surgeon, as without something of this kind it would not be safe, and it would be scarcely possible, to pursue the practice of surgery.

This was a fair specimen of the character of letters frequently received by him. Some of them anticipate the possibility of prosecution; others seek advice as to how they are to escape a threatened prosecution; and still others ask his counsel and attendance when they are actually prosecuted. It is patent to both the legal and medical professions that for the past few years in this country surgeons have been exceedingly subject to prosecutions. During that period extending from the year 1833 to 1866, prosecutions were so frequent in various parts of the United States, but he believed less so in the Southern States, that many eminent surgeons were obliged from self-protection to abandon the practice of surgery. He had known as many as four cases of prosecution for malpractice to occur in a single term of the court. Twenty-five or thirty years ago, there was scarcely a surgeon practising in the Northern States who had not been sued for malpractice, and one-half of whom had not been mulcted in damages.

Why is it that a special department in surgery is more liable to dangers than others? Why does it happen that amputations, and more especially fractures and dislocations, are more than any other branch of surgery exposed to prosecution? Is it because gentlemen who practise this department are less learned and less skilful than are those in other departments of surgery? He thought not.

During the last quarter of a century, foreign countries have not hesitated to give us the credit of superiority in the treatment of fractures. In their books on surgery, a large proportion of cases adduced is taken from this side of the water.

To what, then, shall it be attributed? He was disposed to attribute it to the fact that the profession itself has not ascertained fully what the science and art of surgery can accomplish. He had supposed, in his earlier days, that it was the lawyer—the mean, pettifogging lawyer—who spurred on cases of malpractice,—who induced unfortunate patients to prosecute in the hope that they might recover damages for personal injury. But he had long since changed his mind in this regard. He is now convinced that it is because the profession, while they have had a constant desire to elevate the science and practice of surgery, have not understood fully what is possible and what is impossible to be accomplished in the profession.

In every department of surgery save in the department of fractures and dislocations, surgeons have furnished themselves with statistics as to the relative degree of success of the various operations. It is indicated what percentage of recoveries and deaths to expect. But how is it with fractures and dislocations, which are the most frequent source of prosecutions?

He had constructed tables, the result of much and patient study, the first of which appeared in 1852, and they were published originally in the *Buffalo Medical Journal*. Up to the year 1859, this was the only serious attempt made to ascertain what is the average result in the treatment of broken limbs.

At the request of the American Medical Association, he had prepared a paper on the subject, in which he not only gave the cases as originally tabulated, but a large number of additional cases.

The speaker here referred to the labors of Mr. Pott, of England, who, by his work, succeeded in revolutionizing in that country the treatment of fractures and dislocations, by the introduction of the "physiological method." He employed an inclined plane. With various modifications, it had become the almost universal practice. Dupuytren and others in France did not accede to the views of Pott, so that the triumph was not so great as in England. In this country he gained but a very few followers. There was only a single advocate for his original method, while for the modification there were only two or three. At that time it was stated that the practice of surgery was a disgrace to English surgery; and now, at the expiration of many years, it is again stated, notwithstanding all the so-called improvements and advances, that the treatment of dislocations and fractures is a disgrace to English surgery. This statement at this time is attributed to an eminent surgeon in St. Bartholomew's Hospital,—Mr. Skey.

Now, the speaker was more leniently disposed towards the English surgeon than is Mr. Skey. He did not believe that the English surgeons are any less skilful in the treatment of fractures and dislocations than the French; neither did he consider them any less skilful than Americans. But they had failed to see what the real difficulty is, namely, *that there are impossibilities attempted and claimed which never can be accomplished!*

But Mr. Pott was not the only surgeon who thought that he had discovered a method which would be universal. Mr. South says that anything less than a nearly perfect limb makes the surgeon responsible. Others claim that a fractured thigh can be made the original length; while it is claimed by many that nearly all bones can be made to unite so that the original length can be preserved.

Now, these were the facts a few years ago. He would not say what had caused the change; but it has been frequently remarked to him by gentlemen of the legal profession that prosecutions for malpractice are not so frequent as they were a few years ago. It is evident that there was a decline up to a very recent period. They are, however, becoming more frequent, and the fact calls for an explanation. In the lapse of

time, as year after year rolls around, and he might say almost every year, and almost every month in the year, there are modifications in the treatment of fractures and dislocations. Almost invariably, when new modifications in the treatment of these accidents are announced, new prosecutions are instituted. This seems to have an unfavorable influence upon the people.

Now, in order to prevent this, it will be necessary that some one man shall stand up in every generation as a sacrifice; because whoever attempts to stand between surgery and prosecutions for malpractice must make an enormous personal sacrifice. He had sacrificed much for this purpose, and he proposed to revise his tables a second time. In his investigations so far he has discovered that there have been improvements in surgery, and that great advances have been made in the treatment of fractures, but only occasionally; a thousand things have been suggested, but it is only now and then that a single instance can be pointed out in which there is an advance. Perfection is still unattained. Surgeons still make a little shortening of one-half to three-fourths of an inch in fractures of the clavicle, and a corresponding shortening in fractures of the tibia and fibula.

The remedy for the legal trouble has already been indicated. It consists in not assuming in the treatment of fractures and dislocations more than surgery is able to accomplish. So long as more is claimed than can be accomplished, prosecutions will be instituted, and, he thought, justly. Surgeons cannot certainly complain if, having established a standard of perfection, and having failed to maintain it, the people resort to legal steps to obtain relief.

Dr. Hamilton concluded by calling upon Dr. Stephen Smith, who has been engaged for some years in collecting and collating material for an extensive work on surgical malpractice, to relate his experiences and add his remarks to those which had already been made.

Dr. Smith said he had devoted considerable attention to the subject discussed, and for the last twenty years has made it a business to collect cases with the view of finally publishing them in book form, in order to illustrate the legal responsibility pertaining to surgical, medical, obstetrical, and, lastly, dental practice. He believes that he has collected over two thousand cases. During the earlier history of mankind there was a period of unwritten medicine. At that period the practice of the art rested with patriarchs and priests. After a time, rules of practice were written. This was the beginning of written history. With this period began the history of suits for malpractice, for physicians were obliged to practise according to the rules laid down in the books, and they did not do it sometimes. If accidents happened under these circumstances, the surgeon was liable.

In later history, physicians were held to the latest improvements in the art; and at this day courts are laying down the rule that patients are entitled to the benefit of the best methods of treatment in vogue, and that every physician is in duty bound to know what are the latest improvements, and to treat his patient skilfully. By the word "skilfully" the courts mean skill sufficient to cure the case, and practice according to the very best methods of to-day. And whether the physician or surgeon resides at New York or in Kansas, the courts will hold very much the same view. We are possessed of the means of such rapid diffusion of knowledge and information that the physician very remote from the centres of civilization and learning is as capable of acquainting himself with the latest improvements as his more centrally located brother. And the former cannot escape the responsibility of his actions any more than the latter. The courts have held and do hold them responsible, even according to the information diffused in the medical journals of the day. The physician and surgeon is expected to take the journals, and thus to keep up with the profession. The remedy, he thought, consisted in the publication of average results, and in not claiming too much. He thought that suits for malpractice in the end exerted a healthy influence, for they weeded out of the profession incompetent men, and made book-writers more careful in their statements.

Several lawyers spoke,—Messrs. J. F. Miller, D. S. Riddle, and others,—who thought the trouble rested with the doctors because they were all "at sea" with their facts, and unless they settled upon certain facts and confined themselves thereto they must expect trouble.

Dr. L. A. Sayre introduced a draft of a law which was originally drawn up by himself, and passed by the New York Legislature, but was vetoed by Gov. Hoffman, on the ground of special legislation. It was modified, and afterwards passed by the State of Ohio. He hoped this Society would lend its influence to its adoption by this State, and that it might be adopted by every State in the Union. Its purpose is to require plaintiffs in malpractice suits to give bonds for the expenses of the suit.

W.

REVIEWS AND BOOK NOTICES.

THE MAINTENANCE OF HEALTH. A Medical Work for Lay Readers. By J. MILNER FOTHERGILL, M.D.

Dr. Fothergill is very widely and favorably known to the profession on both sides of the Atlantic by his strictly professional writings, and an examination of the very handsome brochure before us convinces us that before long he will be as widely and favorably known among the more intelligent of the laity. Whilst there is little or nothing in the book absolutely new to the well-informed physician, yet almost any one can gather from its pages many suggestions for his own thoughts and many hints as to the management of patients; and all can conscientiously recommend it to their patients as containing a large amount of most important information conveyed in a most agreeable form. As an instance of the suggestiveness of the work, we mention one idea from its pages which strikes us as novel and plausible, but whose truth seems to us somewhat doubtful. The suggestion, which is conveyed in the most modest and commendable manner, is that in early marriage very frequently sexual indulgence is unbridled, and "that the eldest child in his recklessness and thoughtless self-indulgence tells of the life of the parents at the time of his genesis." We do not believe

that in this country the eldest child is as a rule any less self-contained than his younger brothers, and would rather be inclined to attribute the fact spoken of by Dr. Fothergill as existing in Great Britain to the law of entail. The knowledge that the property is inevitably to be his, the absence of business training, the peculiar deference paid by friends, the toadyism and indulgence of whims by servants, must have a tremendous influence upon the moral development of the eldest scion of a noble house.

LECTURES ON PATHOLOGICAL ANATOMY. By SAMUEL WILKS, M.D., F.R.S., and WALTER MOXON, M.D., F.R.C.S. 8vo, pp. 672. Second Edition. Philadelphia, Lindsay & Blakiston, 1875.

The first edition of this work was issued by Dr. Wilks in June, 1859, and consisted of a series of lectures which he delivered in a voluntary course during the summer session at Guy's Hospital, London. Based on a very large experience in a daily study of the dissection of the dead for fifteen years, and a personal record of between two thousand and three thousand cases, the book in its first edition was a valuable one, characterized by the correctness of its descriptions. Dr. Moxon has prepared the second edition, adding the results of a personal experience at Guy's Hospital, similar to that of Dr. Wilks, a sifting of the stores of facts contained in the invaluable "Transactions of the Pathological Society" of London, and an accurate knowledge of the modern pathology, as enunciated by Virchow and his colaborers. Through these means he has produced a volume which is a faithful and sufficiently copious exposition of morbid anatomy.

The order of arrangement pursued is that adopted in the museum of Guy's Hospital, and includes diseases of the bones; diseases of the joints; diseases of bursæ, tendons, and muscle; diseases of the heart; diseases of the arteries; diseases of the veins; diseases of the lymphatic vessels; diseases of the lymphatic glands; diseases of the nervous system; diseases of the skin; diseases of the respiratory system; diseases of the alimentary canal; diseases of the liver; diseases of the gall-bladder and ducts; diseases of the pancreas; diseases of the spleen; diseases of the supra-renal bodies; diseases of the urinary organs; diseases of the male sexual organs; diseases of the female sexual organs; and on the association of morbid conditions. It will thus be seen that the entire field of special pathology is covered; and it may further be said that there are few subjects which have not received a detailed consideration, while there are still fewer that are omitted; so that, by the aid of the copious index which is appended, the general practitioner can easily find some information upon any morbid specimen which may fall under his notice. For the wants, therefore, of the practitioner we know of no volume so well adapted. The close student of pathology will have to look elsewhere for those preliminary chapters on general pathology which are so necessary to a thorough knowledge of the subject. But his library will also be incomplete without this volume. It is mortifying to have to acknowledge that works on morbid anatomy have not generally a large sale in the American market; but the increased prominence recently given to the subject in some of our medical schools will tend to change this, and we hope the sale of this will be an exception to the rule. The typography, binding, and general appearance of the book are pleasing, and invite purchase. I. T.

CHLORAL AND IPECACUANHA IN CROUP.—In a bad case of croup with urgent dyspnœa, give to a child fifteen months old two minims of ipecacuanha wine, with two grains of chloral, every two, three, or four hours, according to the effect produced.—*Dr. G. Barclay.*

SELECTIONS.

NETTER ON THE POSSIBILITY OF CURING ACUTE PERITONITIS BY INJECTING A SUFFICIENT QUANTITY OF TEPID WATER INTO THE PERITONEAL CAVITY.—Dr. Netter (*Revue Médicale de l'Est*, January 15, 1875) quotes some remarks made by Kœberlé in 1867 on a case of his in which acute peritonitis threatening death occurred after ovariotomy, but was checked and the patient saved by incision into the right flank, where he detected dulness, and the escape of a quantity of red serum from the peritoneal cavity. He gives extracts from the speeches of Kœberlé, himself, and others, at a long debate which followed the reading of this case at the Strasbourg Medical Society. The cause of the speedy relief when the fluid is detected and let out at once in these cases was the chief ground of debate.

Kœberlé, while insisting on speedy action, attributed the danger to the fluid becoming rapidly septic from its contiguity to the intestines.

Netter objected to this—1. Because of the rareness of true idiopathic peritonitis (*i.e.*, excluding cases of perforation, etc.); 2, because of the rareness of this typhoid or septic form itself. He considered the first product of the inflammatory action as the most actively dangerous, and compared it to the acrid mucus which is discharged from the nostrils at the onset of coryza. He also pointed to the numerous successful ovariotomies of Kœberlé and others, successful in spite of handling of the parts, introduction of instruments, exposure to the air, etc., of the peritoneal cavity and its contents. These successes he attributed to the thorough cleansing of the peritoneum at the time of operation, and the speedy evacuation of any fluid which gathered afterwards.

The possibility of applying this principle to other forms of peritonitis was suggested by some of the speakers, and reflection on the subject led to the present proposal by M. Netter.

He considers it would not only be justifiable, but right, in cases of acute peritonitis, to make a small opening into the peritoneal cavity, and inject sufficient tepid water to dilute thoroughly its contents and form an artificial ascites. If relief follow, the injection should be repeated. He supports his proposal by the facts observed in the similar diseases of the pleuræ. When the pleura is dry the fever runs high, but when effusion comes the symptoms abate; and when effusion occurs at the onset often there are hardly any symptoms. Even when some fluid is effused into the peritoneum it gravitates, and the intestinal and upper surfaces become glued with the lymph. He affirms—1, that the liquid secreted in acute peritonitis has only noxious properties in proportion to its concentration; 2, that, largely diluted with water, it loses these noxious properties.

He gives in full an old paper by Dr. Herlin in 1767, on some experiments which he and others made on cats and dogs, ligaturing the bile-duct and puncturing the gall-bladder, and letting the bile into the peritoneum, afterwards practising warm-water injections. The animals appeared none the worse for the operation, though dogs, as Netter points out, are specially liable to peritonitis. He arrives at the following conclusions:

1. It is possible to cut short acute peritonitis by injections at its commencement.

2. If Herlin's experiments be repeated without the injections and the animals die, it will be because the injections were not used.

3. Since it has become a recognized practice to use injections when peritonitis comes on after ovariotomy, etc., so it should be in the other forms of peritonitis where there is no surgical opening to begin with. He

considers the adhesions formed by the intestines in puerperal and other cases a cause of the extreme gaseous distention and consequent dyspnœa and collapse: if the injections alone will not separate these adhesions, aid may be given by simple punctures, to let out the gas. He quotes from Kœberlé that these adhesions lead to little pouches full of serum or pus. In a note at the end of the paper he advocates leaving the wound open after herniotomy, and injecting, if necessary.

[The reporter has several times noticed the pouches referred to in post-mortem examinations, and that they are surrounded by extra inflammatory action: mere puncture and draining of course give no exit for such collections of serum or pus.—*Rep.*] — *J. Knowsley Thornton, in London Medical Record.*

LORAIN ON CASES OF SUDDEN EMOTIONS IN WOMEN PRODUCING PERSISTENT NEUROSES, SUCH AS HYSTERIA, CHLOROSIS, CHOREA, AND PARALYSIS AGITANS.—M. Lorain, after noticing the popular tendency to argue on the *post hoc ergo propter hoc* principle in nearly every disease, asserts that this tendency has caused medical men in many cases to treat such accounts with skepticism. "We have good reason," he says, "to reject these two facile explanations; but should we therefore always refuse them in a spirit of routine, or should we sometimes admit them, and to what extent?"

With a view to the settlement of these questions, he submits to notice the following reflections on cases which have occurred in his own experience. In each of these cases there has been some sudden emotion followed by neuroses, which have persisted for a greater or less period.

Other considerations arise from the study of these cases. Among these are the following: Does the accident decide the seat of the morbid manifestations which follow it? Have such accidents corresponding morbid conditions? Is it right to call a woman hysterical who suffers from hemiplegia, or who falls into a state of clonic convulsions with globus hystericus and other morbid sensations?

Shall a woman, however, who becomes after a similar accident choreic, be excluded from the ranks of hysterical patients because of her chorea?

Is it also necessary to make a separate class for chlorotic patients?

The author protests against such exclusiveness, and proposes that all the cases of neuroses occurring in women after sudden accidents should be included in one term, *Féminisme*.

Among the observations recorded are the following. Two girls suffered from chorea following fright. At the time of the accident they were menstruating, and in consequence of it the discharge was immediately arrested. In one the chorea is combined with rheumatic symptoms; in the other there are so many undoubted hysterical symptoms that she must be classed among the hysterical patients. [Is it not probable that the latter of these two patients has imitated the choreic symptoms of the former? They are reported to have been in the same ward.]

In another case, a girl, aged fifteen, who had been ailing and out of sorts for some time, was startled during menstruation by a flash of lightning, which struck the ground about thirty yards from her. The catamenia were arrested, after having lasted for but a small portion of the time they generally did. The next day she was attacked with chorea, which became very severe.

Another girl, aged twenty, after the bite of a horse, was seized with hysterical convulsions, which were followed by loss of cuticular sensibility, and ataxic symptoms. In another case of a girl, aged twenty, after the receipt of some bad news, hysterical paralysis occurred.

The last case related is that of a girl, aged seventeen, who was attacked by paralysis agitans after having been frightened during the siege of Paris by the explosion of a shell which killed several people who were standing near her.—*W. Kesteven, Jr., in London Medical Record.*

THE COUCHARD.—Dr. Diver, of Caterham, has invented a very ingenious contrivance for exerting pressure on the abdomen and back of parturient women, which he styles the "couchard." It is a kind of apparatus which the woman puts on during labor, and the patient is enabled, by pulling during the pains, to give considerable pressure to the back and support to the uterus at the same time. The patient puts on a pair of connected pads, one over the back, the other over the front of the body, and then places her feet in a pair of stirrups. Through the tops of these stirrups a cord running from the handle passes so that the hands and feet act in antagonism. This tightens the cord, which is attached to a soft cushioned pad over the back, which draws that pad and the one in front together, and gives great relief to the patient.

Patients have expressed themselves as greatly pleased by the support this very ingeniously devised apparatus affords to them during labor. Dr. E. Diver has taken much trouble in perfecting this invention of his, and writes us that additional experience shows him how much relief it gives to many of his patients. We should mention that, by means of a strong cord attached to the handle, and pulling over the end of the bed, the patient can employ the same abdominal and back pressure comfortably whilst lying in bed. All such devices for assisting in the alleviation of suffering are highly commendable, and we wish success to Dr. Diver's Couchard.—*Medical Press and Circular.*

DUBOUX ON RHEUMATISMAL INSANITY.—In a case of rheumatismal insanity reported in the *Bulletin Médical de la Suisse Romande* for December, 1874, the patient was suffering from acute articular rheumatism with endocarditis, and presented all the characteristics of rheumatismal madness,—combination and alternations of various forms of mental alienation, mania, melancholia, dementia, with a marked predominance of notions of persecution and hallucinations of sight and hearing of a generally distressing character. For several days there was marked stammering, a symptom which has before been noted in some cases of this kind. M. Duboux brings into notice the commonness of melancholic mania in rheumatismal insanity; in the great majority of cases coinciding with cardiac disease. On the other hand, it is interesting to note how among lunatics suffering from the persecution-delirium, generally with persistent hallucination, we find individuals laboring under heart-disease, especially among old men.—*London Medical Record.*

GLEANINGS FROM OUR EXCHANGES.

EXPLORATION OF THE ABDOMINAL CAVITY IN EXTREME CASES OF OBSTRUCTION OF THE BOWEL.—Mr. Teale (*Lancet*, March 13) believes that if further experience should strengthen the growing surgical opinion in favor of greater boldness in opening the peritoneal cavity, we may look for as great an advance in the management of many obscure and hitherto hopeless cases of obstruction of the bowel as has taken place in the once deemed hopeless cases of ovarian disease.

As a contribution to the knowledge of this subject, Mr. T. gives notes of the following case:

He was consulted in October, 1873, by a man forty

years of age, for severe pain in the small of the back, distressing when he moved about, most severe at night. He passed blood and mucus from the bowel, and the evacuations were small and narrow. On examination, nothing was found amiss with the rectum. He was advised rest, with occasional morphia suppositories, and careful regulation of his diet. Under this treatment the evacuations became perfectly regular and natural, except that the discharge of blood and the pain did not cease.

Five weeks later, a small tumor was felt near the left iliac fossa. He was then ordered to take small doses of Dover's powder, and to make further modifications of diet, the result of which was that the discharge of blood gradually diminished, and since Christmas, 1873, has not reappeared. At Christmas he resumed work, though suffering at times as much as ever from the pain in the back. From Christmas to June he got on fairly well, easing his pain by suppositories and Dover's powders, and having a *solid, fully-formed evacuation* daily, free from blood and mucus.

In the middle of June the action of the bowels, which up to this date had continued to be perfectly natural, was suddenly arrested; aperients and enemata were of no avail, and the body became intensely tympanitic. At the end of ten days, during which no relief could be obtained, by the advice of his medical attendant, Mr. Atkinson, he was admitted under my care, at the Leeds Infirmary, on July 1, 1874.

After his admission, he was treated by nutritive enemata and hypodermic injections, with a very small allowance of brandy and milk by the stomach.

At the end of four weeks from the commencement of the complete obstruction, all hope of spontaneous resolution was abandoned. During the latter three or four days he had suffered excruciating pain, had lost flesh rapidly, and had several times been delirious; and it seemed as if, unrelieved, he could not possibly live more than three or four days.

After consultation, it was decided to open the abdominal cavity in order to search for the seat and the cause of the stricture, and to determine the possibility of relieving the obstruction by right or left lumbar colotomy.

The patient having been chloroformed, an incision was made in the middle line below the umbilicus, and manual exploration made. The first points made out were the distended cæcum and the junction of the ileum with the colon. The ascending colon and the transverse colon were then traced, which latter, owing to its extreme distention, first descended to the pelvis and then doubled back and ascended in front of the left lumbar region to the left kidney, lying in front of and concealing the descending colon. Finally, below the crest of the ileum the distended bowel was felt to terminate in a hard mass of the size of a walnut, apparently attached to the bowel, and puckering it. It was clear, therefore, that left lumbar colotomy would give the relief desired. Five wire sutures were then introduced into the wound and tightened temporarily as far as was deemed prudent, considering the tense state of the abdomen. The patient having been turned to a prone position, the usual operation of Amussat was performed in the left loin. The opening of the colon was followed by a large escape of flatus and of semi-fluid fecal matter, which so far reduced the distention of the abdomen as to allow the wire sutures to be tightened up, and effectually to close the wound in the front of the abdomen.

The patient made a good recovery from the operation. For the first day or two large quantities of liquid fecal matter escaped by the lumbar opening, and about the third day some solid scybalous matter was evacuated per anum, the passage of which was attended with very severe pain. By degrees more and more of the contents of the bowel escaped per anum, until, at the end of three months, not more than one-fifth passed through the lumbar opening.

Three months later, and six months after the operation, he was feeling better than he had for a year past. It was feared, however, that the disease might be returning, since there was a good deal of pain and bearing down, and but a small portion of the fæces were passed per anum.

Mr. Teale adds two cases of somewhat similar operation in cases where peritonitis had set in, the result being in each case, possibly from too long delay, unfavorable.

Remarkable Elevation of Temperature.—At a recent meeting of the Clinical Society (*Lancet*, March 6) Mr. J. W. Teale read notes of a case occurring under his care, of which the following is an abstract:

A young lady, thrown from her horse in the hunting-field at the beginning of September, 1874, sustained fracture of two of her ribs and some obscure injury to the spine. In due course the fractured bones united, and all would have gone well but that the pain and tenderness in the back ominously persisted. Symptoms of spinal meningitis set in, and, concurrently with them, the temperature of the body, which had regained the normal shortly after the accident, began to rise. One month after the accident it was 101°, in another month it reached 105°, and thence its extraordinary and unprecedented progress can only be reckoned by days. Between November 8 and 12 it fluctuated between 110° and the great elevation of 118°. But it did not stop here. The next day it on two occasions reached 122°, falling in the interval to 114°. Thence the rise and fall of the index of the thermometer was strange in the extreme, and it would be tedious to refer here to all its fluctuations. Suffice it to say that it kept for three weeks between a minimum of 108° (on one occasion only) and a maximum of 122°; throughout December it registered the comparatively low level of 110° during the first half of the month, mounting up to between 112° and 114° during the second half; and then, in the early days of January, it rapidly subsided to 104°, becoming normal on the 10th of the month. The condition of the patient during this very super-normal state of body heat was, save in the periods of highest range, apparently not one of extreme danger; we gather, indeed, that during December her general health was improving and the spinal symptoms were slowly but surely subsiding. Nor were the circulatory or respiratory functions much deranged, the pulse never being above 120, and the respiration not being notably embarrassed. To be sure, she emaciated much and was extremely prostrate, the catamenia ceased, and the urine was very scanty and loaded; but a continuous body heat of 102° or less, lasting for two months, would *a priori* have done as much.

The utmost care was exercised by Mr. Teale in order to remove all sources of error. No fewer than seven thermometers were used in the course of the case; they were inspected by two or three trustworthy witnesses before and after each application, and the results were always immediately recorded in writing. The temperature was taken in the axillæ by two thermometers at once, and then these were interchanged and the observation repeated.

Apomorphia.—Within the last two years much has been learned of this drug, which seems likely to prove a valuable addition to therapeutics, and recently a tolerably complete monograph upon it has been published by M. Victor Bourgeois (*De l'Apomorphin; Recherches cliniques sur un nouvel émetique*, Paris, 1874).

The conclusions to which this author is led (*Dublin Med. Jour.*, March) accord in all essential points with

the observations of Marthiessen and Wright, and are briefly as follows:

1. Apomorphia, or rather hydrochlorate of apomorphia, when pure and employed in suitable doses, is a rapid, simple, and harmless emetic.

2. It is *rapid*, for its action always takes place at latest within ten minutes after administration.

3. It is a *simple* emetic, for it does not appear to exert any influence upon the other functions.

4. It is innocent, and does not seem to possess dangerous toxic properties.

5. Lastly, the facility with which it can be administered by hypodermic injection fulfils a therapeutic desideratum, and suggests its adoption by physicians in some special circumstances, such as the medication of children and of the insane.

As an average dose, for an adult man, of the Scotch hydrochlorate of apomorphia prepared by Macfarlan & Co., Edinburgh, M. Bourgeois fixes on one-sixth grain hypodermically and one-half grain by the mouth. The best form of solution is that obtained by dissolving one part of the salt in one hundred parts of distilled water. If the proportion of the salt be greater the solution becomes muddy, and it is necessary to add one or two drops of HCl in order to clear it,—a serious objection in the case of a liquid intended for subcutaneous injection.

Two Cases of Idiopathic Tetanus—Treatment by Chloral—Recovery.—The *Indian Medical Gazette*, February 1, contains the following cases:

The first, a boy 13 years of age, was treated by Surgeon-Major G. T. Hunter for tetanus, occurring after exposure to the sun and beating with a cane. No contusions or wounds could be discovered. Two peculiarities were noticeable: 1. The tetanic spasm commenced at the diaphragm, then affected the fingers of the right hand, and afterwards extended to the muscles of the abdomen and legs. 2. Deglutition as regards liquid nourishment was easy throughout the course of the disease, though he could not open his mouth more than half an inch for several days. Treatment: tr. cannabis indicæ, ♏ x, and potass. bromid., grs. v every third hour, and chloral hydrat. grs. xii three times a day, together with inhalations of chloroform as required. The diet was generous, and the boy took as much as twenty-two ounces of wine daily, without any intoxicating effect. Recovery took place in about a month.

The second case, under care of Surgeon H. W. Hill, was that of a Hindoo, 40 years of age, who suffered from a severe but typical attack of idiopathic tetanus, caused probably by exposure to the damp chilly air of night, when the body was relaxed by the heat of the day and the constitution rendered "below par" by a recent febrile attack.

During the first few days the tetanic spasms were exceedingly frequent and severe, but these gradually yielded to the steady administration of chloral hydrate, grs. xx thrice daily, which was kept up through the whole course of the disease, which terminated in recovery at the end of six weeks.

Two Cases of Tetanus following Frost-Bite.—The following cases are recorded in full in the *Canada Lancet*, March, 1875. They occurred under the care of Dr. Bethune, of Toronto. The first was that of a farmer who was exposed to intense cold for about three hours while driving. His feet and fingers became severely frost-bitten without his becoming aware of the fact until he arrived home. On admission to the Toronto General Hospital, four days later, the toes and the greater part of both feet were found in a condition of moist gangrene.

The fingers and parts of both hands on the dorsal surface were black and dry. Four days after admission he was seized with tetanic symptoms, which rapidly developed. Chloral hydrate in thirty-grain doses, with extract of calabar bean in one-fourth-grain hypodermic doses until five grains had been given, failed to combat the disease, and the patient died in thirty hours after the accession of the attack.

The second case was that of a man who, having lain out in a barn all night, had both feet severely frost-bitten, subsequently becoming partially gangrenous. In this case trismus set in nine days after exposure, and soon developed into well-marked tetanus, to which the patient succumbed in about thirty hours.

The treatment in this case consisted in hypodermic injections of, first, one grain of morphia, and subsequently the same in one-half grain injections every hour.

Extirpation of the Parotid Gland for Malignant Disease.—Dr. Charles Brigham communicates to the *Western Lancet* for February, 1875, the notes of a case in which he had removed the entire right parotid successfully by means of a curved vertical incision two and a half inches in length, with the concavity towards the lobe of the ear, with subsequent dissection by the aid of both scalpel and fingers. Eight ligatures were placed upon arteries, the wound cauterized with pure carbolic acid, and dressed with cotton-wool and Lister's gauze.

The tumor weighed two ounces, and was of cartilaginous hardness. Under the microscope it was found to contain small oval cells. The patient recovered without an untoward symptom. The facial nerve having been severed in the course of the operation, partial paralysis of the parts supplied by it was the result. Six weeks later the paralysis of the face was better, but the upper eyelid was still paralyzed, and there was little if any hearing in the ear of the affected side.

MISCELLANY.

On Baptism at Birth.—In every community composed of religious bodies holding different tenets of faith on some points, it is believed to be conducive to harmony and good feeling, as well as consistent with that broad and liberal catholicity of sentiment that should always characterize the professor of the healing art, to conform to the usages of his patrons respecting rites having, in their views, important religious significance.

As containing an authorized expression of the views of the Roman Catholic church respecting baptism, the following translation from the "Cours d'Accouchements," a recent great work on obstetrics by Dr. L. J. Hubert, Obstetric Professor in the Catholic University of Louvain, is submitted to professional readers:

This work is especially dedicated to the young gentlemen who come to this Catholic University to receive their medical education. Believing that it may be useful to those who may be frequently called to administer this sacrament to draw their attention to the teaching of the church, I have decided to finish this "Cours d'Accouchements" by a special chapter on the subject of ante-natal baptism of infants.

When an infant is not in immediate danger of death, it is at the church and by a priest it should be baptized; but when its life is imperilled, baptism may be conferred everywhere and by everybody (ecclesiastic or laic, man

or woman, believer or infidel), and it is valid, provided it is administered with the *intention*, the *material*, and with the *formula* required.

Who, in case of peril, should administer baptism?

If the child is born, and a priest is present, he should always perform the rite. The father or mother may perform it only in the absence of any other qualified person. If the infant is born, and there is a man present capable of performing it, he should do it in preference to any woman, or even a midwife. If the fœtus is not born, baptism in utero should be administered, either by the obstetrician or midwife in attendance.

The general purpose or intention to do what the church does is sufficient.

The material is water, pure water, from spring, river, or well, and whether previously blessed or not.

The formula is: I baptize you in the name of the Father, of the Son, and of the Holy Spirit.

This formula should be distinctly articulated, and loud enough to be audible to the person himself.

The baptism is absolute or conditional according to circumstances, as we shall proceed to show. The manner varies as to whether the child is born or not.

A. If the child is born, the baptizer should himself pour water on the head of the child at three times, corresponding with the mention of the respective names of the Holy Trinity.

If there is any doubt respecting the life of the newborn, the formula should be modified thus: If thou art living, I baptize thee, etc.

If there exists any doubt of the human nature of the being to be baptized (viz., if a marked monstrosity or rudimentary embryo), it should be added, "If you are a rational being, I baptize you," etc. Abortions should receive the rite in the same manner and modified in the same manner as the infant at term.

If the ovum should be expelled entire, the baptism should first be done through the membranes, saying: If you are fit to receive baptism, I baptize you, etc.; then, having opened the membranes, the rite is repeated, adding, if thou hast not been baptized. When the baptism is thus conditional, the condition mentioned must be distinctly articulated; it is not sufficient merely to think or to will it. Such is the canonical law.

B. Supposing the fœtus is still in whole or in part unborn, it then becomes necessary to baptize it in utero, varying the method according to circumstances.

(*a.*) If the head is delivered, it may be baptized, either absolutely or conditionally, as if the birth were completed, and no subsequent baptism will be required.

(*b.*) But if an arm or foot present, those parts should be baptized, and the danger persisting, the chest and the head should be successively baptized, with the formula: If thou hast not been baptized, etc.

(*c.*) But if the fœtus is still enclosed in the uterus, the baptism should be performed by carrying the fingers, or a piece of lint or sponge, or using a siphon or syringe, and with the formula as before stated, and modified according to the circumstances. After birth it may be rebaptized if alive.—*Peninsular Journal of Medicine.*

THE DAWN OF LIFE.—Professor Williamson, in a lecture on the "Dawn of Life," delivered at Glasgow on the 2d ult., referred to the experiments of Dr. Bastian, and remarked that one positive experiment showing that animal life did not result after the application of heat and the careful exclusion of the atmosphere was of more value than a hundred experiments giving an opposite result. He mentioned an interesting fact derived from the recent experiments of two Liverpool gentlemen who had sedulously watched by a powerful microscope the habits of the infusoria. They subjected the water in which they were contained to 250° of heat, and found that, while the mature animalcules were destroyed, the germs were not, but a heat of 300° destroyed the germs also. Professor Williamson believed that if these experiments were verified, the question of spontaneous generation might be considered to be practically settled. The deepest reaches of the microscope had shown that life was produced from life,—that this one universal law prevailed in the organic world, just as the farthest reaches of the telescope had shown that gravitation prevailed in the remotest systems in space. —*London Medical Record.*

AT the last meeting of the Board of Trustees of the University of Pennsylvania, Dr. James Tyson was elected Professor of Pathology, Dr. Louis A. Duhring Professor of Diseases of the Skin, and Dr. H. C. Wood Professor of Diseases of the Nervous System, in the University Hospital.

"PUNCH" ON HOLLOWAY'S ASYLUM.—*Punch* furnishes this inscription for the front of the idiot-asylum founded by Mr. Holloway, who made his fortune in "patent medicines:"

> "Not oft is fate so just: see wealth restored
> Back to the simple source from which it poured."

NOTES AND QUERIES.

A STATED meeting of the Northern Medical Association of Philadelphia will be held at their hall, 608 Fairmount Avenue, on Friday evening, April 23, at 8 o'clock.

Dr. A. K. Minich will read a paper on "Purpura Hæmorrhagica treated by Ergotin."

The medical profession are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 6, 1875, TO APRIL 12, 1875, INCLUSIVE.

ROSE, GEO. S., ASSISTANT-SURGEON.—Assigned to temporary duty at Madison Barracks, New York. S. O. 69, Military Division of the Atlantic, April 10, 1875.

ELBREY, F. W., ASSISTANT-SURGEON.—To report to the Commanding General, Department of the South, for assignment to duty. S. O. 63, A. G. O., April 10, 1875.

CHERBONNIER, A. V., MEDICAL STOREKEEPER.—Granted leave of absence for one month. S. O. 63, c. s., A. G. O.

ERRATUM.

FOR Dr. Geŏhard, read Dr. Gerhard, in the report of the County Medical Society Meeting in our last issue.